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**LABORATORY**

**OF THE**

**DEPARTMENT OF TRADE AND COMMERCE**

**OTTAWA, CANADA**

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**BULLETIN No. 417**

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**MANUFACTURED CATTLE FEEDS**

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## NOTES AND COMMENTS.

Under this heading, as occasion arises, the Bulletins issued by this Department will contain, as an appendix, such comment as may seem necessary or advisable upon matters relating to the work of the Department in connection with the administration of the Adulteration Act, the Fertilizers Act, the Feeding Stuffs Act or the Proprietary Medicines Act.

It frequently happens that correspondents ask information regarding the above Acts, of such a nature that the matter in question possesses general interest, and comment upon it would prove acceptable and useful to others than the immediate questioner. In such cases the reply may find a place in these columns. For convenience of reference these notes will be numbered in series.

A. MCGILL,  
*Chief Analyst.*

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**MANUFACTURED CATTLE FEEDS.**

OTTAWA, November 23, 1918.

F. C. T. O'HARA, Esq.,  
Deputy Minister of Trade and Commerce,  
Ottawa, Ont.

Sir,—I beg to submit a report upon an inspection of Manufactured Cattle Feeds. The samples in question amounting to 109 were sent in by our inspectors in April, May and June of the present year.

Cattle Feeds of the kind now being considered, can only be legally sold under a registration number, and a guarantee of feeding value which must be stated in terms of protein, fat and crude fibre. They are therefore generally known as Registered Feeds. (The Commercial Feeding Stuffs Act, Section 5.)

Nine samples of the present collection were sold, without bearing registration numbers or certificate of guarantee; and in consequence these are subject to penalty under Section 15 of the Act.

The samples in question are as follows:

No. of Sample.	Name of Sample.	Name and Address of		Nature of Adulteration.
		Vendor.	Manufacturers.	
80637	Pure Linseed Meal.....	Carter & Co., Charlotte-town.	Steele Briggs Seed Co., Toronto.	Sold without registration No.
80103	Poultry Feed (Beef scraps).	W. H. Thorne, St. John, N.B.	Colonial Fert. Co., Windsor, N.S.	" "
80114	Jersey Pig Feed.....	Kitchen Bros., Ltd., Fredericton.	Robin Hood Mills, Moose Jaw.	" "
8144	Flax Seed Meal.....	J. E. Drolet, Quebec....	Sherwin Williams Co., Montreal.	" "
8145	" " ".....	" " ".....	Unknown.....	" "
8152	Caldwell Horse Feed....	P. Bussiere, Quebec ....	Caldwell F. & C. Co., Ltd., Dundas.	" "
80678	Pure Ground Oil Cake...	O. P. Snyder, Morrisburg.	Peterboro' Cereal Co., Peterboro'.	" "
80679	Oatmeal Feed.....	" " ".....	Ogilvie's, Ltd., Montreal.	" "
84151	Caldwell's Dry Dairy Meal.	G. F. Windecker, Dunnville.	Caldwell F. & C. Co., Dundas.	" "

Ten samples sent in by our inspectors are not Cattle Feeds, but medicated preparations, of the nature of Condition Powders.

Eighty (80) samples are found to be genuine, in the sense of being sold under registration and guaranteed value, and of meeting such value. This has regard to their content in nutrient material. Another phase of the matter, namely the presence of noxious weed seeds I shall refer to later.

Ten samples fail to meet requirements of their guarantee as to feed value and must be regarded as adulterated under the Act. These are as below:

No. of Sample.	Name of Sample.	Name and Address of		Nature of Adulteration.
		Vendor.	Manufacturer.	
83461	Calf Meal .....	S. Gaudy, Yarmouth, N. S.	Chisholm M. Co., Toronto.	7 p.c. below guarantee in protein.
83464	" .....	Lamont & Steadman, Kentville, N. S.	W. A. Jenkins, Ltd., London.	4 p.c. excess fibre.
80632	" .....	Auld Bros., Charlottetown.	Blatchford Calf Meal factory, Waukegan, Ill.	3 p.c. low in protein.
80638	Oil Cake Meal .....	A. Horne & Co., Charlottetown.	J. J. Livingston, Baden, Ont.	3½ p.c. low in protein, 1½ p.c. low in fat.
80668	Pure Corn Oil Cake Meal.	J. P. Doyle, Prescott....	St. Lawrence Starch Co., Port Credit.	3 p.c. low in protein and 3 p.c. low in fat.
80671	Alberta Stock Feed.....	" "	Chisholm M. Co., Toronto.	7 p.c. low in protein.
80695	High Grade Cream Calf Meal.	Major & Kettles, Ottawa.	W. Rennie & Co., Toronto.	4 p.c. low in protein.
84079	Maize Gluten Meal (Jersey Brand).	Riseborough & Jackson, Toronto.	St. Lawrence Starch Co., Port Credit.	2½ p.c. low in protein.
84083	Rennie's Calf Meal .....	Wm. Rennie & Co., Ltd., Toronto.	Vendors.....	1½ p.c. low in protein, 1½ p.c. low in fat.
79812	Calf Meal.....	A. E. Rea, Brandon....	The Mayer Co., Winnipeg.	4 p.c. low in protein.

The manufacturers of 80668 and 84079 explain the lack of feed value in these samples as due to the exceptional conditions under which corn was purchased and milled in the early part of 1918.

The same explanation is given by the manufacturers of samples 80671 and 83461 in which a deficiency of 7 per cent. protein occurs.

The Seed Control Act of 1911 is administered by the Department of Agriculture. This Act aims to prevent the spread of harmful weeds in Canada by limiting the number of their seeds which may be present in seed grain, clover, timothy, etc.

It is recognized that noxious weeds may spread through the presence of their seeds in cattle and other feeds, since it has been demonstrated that even passage through the alimentary tract of domestic animals does not necessarily destroy the vitality of such seeds. (See Bulletin 254, pp. 7-9; and Bulletin 319, pp. 4 and 5).

Limits to the number of weed seeds per pound in seed grain, etc., have been fixed by Order in Council, under the Seed Control Act.

A less vigorous exclusion of weed seeds is necessary in Feeds because the vitality of a very considerable percentage of these seeds is destroyed by digestion.



An Order in Council of 3rd December 1917 (published as G. 1292) sets a limit of 25 seeds per pound for those species classified by the Seed Control Act as "noxious weeds". Section 17 of this Order, is as follows:

"17. The presence of presumably vital weed seeds in any form of Feeding Stuff shall be held to constitute adulteration under the Act, when more than 25 seeds per pound, as enumerated in the Seed Control Act of 1911, are present in the feed."

Four samples of the present collection, all of which are quite satisfactory as regards their nutritive value, must be regarded as adulterated from the point of view of their content in vital weed seeds. These are as follow:

No. of Sample.	Name of Sample.	Name and Address of		Nature of Adulteration.
		Vendor.	Manufacturer.	
80648	Dry Hog Feed.....	Sanders, Soule & Casselman, Chesterville.	Caldwell, F. & C. Co., Dundas.	Noxious weed seeds in excess.
80655	Sampson Feed.....	S. Kerr, Kemptville....	Campbell, F. M., Ltd., Toronto.	"
81276	Tillson .....	Quaker Oats Co., Peterboro.	Vendors.....	"
84159	Caldwell Molasses Dairy Meal.	Caldwell, F. & C. Co., Dundas, Ont.	" .....	"

Weed seeds in large amount are separated from grain at the elevators, and at various mills. These seeds possess, in many cases, a high feed value, especially in protein; and, when not otherwise objectionable, they may constitute a valuable ingredient in poultry and other feeds. Of course they should always be finely ground in order to ensure destruction of their vitality. Many of these seeds, however, are poisonous, (certain species of Mustard, Purple Cockle) and should not enter into manufactured Feeds.

One other point may be referred to. Samples No. 80677, 80680 and 80683 are registered under the numbers 448, 566 and 345 respectively, with guaranteed values as follow:

	Protein.	Fat.	Fibre.
448.....	10.50	4.00	10.50
566.....	19.50	8.50	8.00
345.....	11.11	2.73	15.51

The labels on the packages in which these samples were sold, claim the values:—

	Protein.	Fat.	Fibre.
448.....	10.00	4.60	10.00
566.....	20.00	9.18	7.50
345.....	10.00	3.00	16.00

This is in violation of the requirements of Section 7 of the Act, and subjects the manufacturer to the penalties of Section 15.

It must, however, be noted that whether these samples are judged on the basis of values actually registered, or upon the values printed on the tags or labels, they satisfactorily meet their guarantees as to protein, fat and fibre. I would therefore suggest that the cases be dealt with leniently.

I beg to recommend publication of this report as Bulletin No. 417.

I have the honour to be, Sir,

Your obedient servant,

A. MCGILL,

*Chief Analyst.*

